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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,627	06/05/2000	Guy Euget	FR9-1999-0073 US1	7746

7590 12/04/2003

EXAMINER	
RYMAN, DANIEL J	

ART UNIT	PAPER NUMBER
2665	10

DATE MAILED: 12/04/2003

Andrew Calderon
McGuire Woods LLP
1750 Tysons Blvd.
Suite 1800
Mclean, VA 22102

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/587,627	Applicant(s) EUGET ET AL.	
	Examiner Daniel J. Ryman	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/12/2003 have been fully considered but they are not persuasive. On page 13, of the response, Applicant argues, with regards to claim 1, that Ferguson does not teach or suggest "target DLSw access node providing access to the target SNA node, in response to the undirected query". Examiner, respectfully, disagrees that Ferguson does not teach or suggest the limitations of claim 1, as cited in the rejection of claim 1. For example, Ferguson does teach "at target DLSw access node providing access to the target SNA node, in response to the undirected query, sending to the source DLSw node a reply message comprising addressing information of the target DLSw access node providing access to the target SNA node". Ferguson discloses that the DLSw nodes forward encapsulated frames from the token ring for transport over a wide area network (col. 4, line 64-col. 5, line 27). Ferguson also discloses that SNA devices transmit "explorer" frames (undirected query) in order to discover unknown paths (col. 3, line 26-37). Thus, it follows that when the DLSw node receives an "explorer" frame, it transmits an equivalent message to another DLSw node, which then relays the message to an intended destination SNA node. This signaling, as broadly defined, is "at target DLSw access node providing access to the target SNA node, in response to the undirected query" since the target DLSw node forwards the message to the target SNA node after it receives the message. In addition, it is implicit that the responses between the target DLSw node and the source DLSw node contain addressing information. The DLSw nodes communicate via a TCP/IP cloud where TCP/IP communications require addressing information to be contained in a source and

destination address fields of a packet for routing purposes. Therefore, as broadly defined, Ferguson does teach the limitations of claim 1, as cited by Examiner.

2. Applicant goes on to argue that Ferguson and the invention differ since the invention "eliminates the need or maintenance of a table at each DLSw node by sending an undirected query over the spanning tree". Applicant cites Fig. 3 and col. 10, lines 44-50 of Ferguson to demonstrate that Ferguson contains a DLSw table. In response to Applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that each DLSw node does not need to store or maintain a table) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Since Applicant does not claim that not every DLSw node contains a table, the fact that Ferguson has each DLSw node contain a table does not result in Ferguson failing to read on the claims.

3. On pages 13-14 of the Response, Applicant argues that the combination of Ferguson and Mead "does not even remotely resemble that of the claimed invention". Applicant goes on to argue that Mead "creates very large overhead which is avoided in the present invention". Again, while there may be differences between the disclosed invention and the prior art, these differences must be claimed before the claims are distinguished over the prior art. In the present situation, there is no mention of overhead in the claims. Therefore, Examiner maintains that combination of Ferguson and Mead reads on the claims, as the claims are currently worded.

4. Applicant proceeds to argue that Mead not does teach or suggest "at target DLSw access node providing access to the target SNA node, in response to the undirected query, sending to the

source DLSw node a reply message comprising addressing information of the target DLSw access node providing access to the target SNA node"; however, as previously argued by Examiner, Ferguson teaches this limitation. As such, Examiner does not rely on Mead to teach this limitation, nor is Mead required to teach this limitation in order for the prior art to read on the claims.

5. Further, in response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ferguson does not explicitly teach how the DLSw nodes connect with one another other than to disclose that the routers are in a peer relationship (col. 4, lines 37-63). Mead teaches that the DLSw protocol is similar to the source route bridging protocol except that the two protocols perform local termination differently (col. 2, lines 52-56). Mead also teaches that in the source route bridging protocol, if a connection is not known, a broadcast is sent over a spanning tree in order to discover the path (col. 1, lines 16-36; col. 1, lines 38-53; col. 2, lines 7-19; and col. 2, lines 49-67). Therefore, it follow that Mead teaches how the DLSw nodes can discover and connect with one another through a broadcast sent over a spanning tree. Since Ferguson does not explicitly teach how the DLSw nodes connect with one another while Mead does teach how these connections can be formed in the DLSw protocol, the combination of Ferguson and Mead is proper.

6. On pages 14-15 of the Response, Applicant again argues that differences exist between the present invention and the prior art, such as differences with overhead and DLSw tables. As previously stated, while there may be differences between the present invention and the prior art, such differences must be claimed in order to distinguish the present invention from the prior art. As currently worded, Examiner maintains that the prior art reads on the claims.

7. On pages 15-16 of the Response, Applicant argues that Haggerty does not teach or suggest "locating a target DLSw access node providing access to the target SNA node sending an undirected query over the spanning tree". Examiner, respectfully, asserts that Haggerty is used in the rejection to provide further explanation as to why a spanning tree configuration is beneficial. Therefore, the purpose of Haggerty is to provide a stronger motivation for the combination of Ferguson and Mead. As such, Haggerty does not teach any limitations in the claims, per se. Instead, Ferguson and Mead teach the limitations of the claims, with Haggerty providing a stronger motivation as to why Ferguson and Mead should be combined.

8. For the above reasons, Examiner maintains that the rejections of the claims is proper. In order to overcome these rejections, limitations, which distinguish the prior art from the present invention, should be added to the claims.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information Disclosure Statement

10. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. The references contained on page 3, lines 18-22 and page 5, lines 7-11 should be included in an IDS.

Drawings

11. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: ref. 420 (see page 17, line 21 and Fig. 4). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

12. Claim 1 is objected to because of the following informalities: on line 8, "that are capable of at least one understanding or interpreting" should be "that are capable of at least one of understanding or interpreting". Appropriate correction is required.

13. Claim 9 is objected to because of the following informalities: on line 4-5 "receiving from a source DLSw access node" should be "receiving at a source DLSw access node"; and on line 10, "reply message within in a local directory databases" should be "reply message within a local directory database". Appropriate correction is required.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 1-6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al (USPN 6,571,272) in view of Mead et al (USPN 6,061,728) in further view of Haggerty et al (USPN 6,331,983).

16. Regarding claims 1 and 8, Ferguson discloses, as prior art, a method for establishing a Systems Network Architecture (SNA) connection between a source SNA node and a target SNA node through a packet switching network using Data Link Switching (DLSw) access services, said packet switching network comprising a plurality of DLSw access nodes, said DLSw access nodes comprising one or a plurality of Data Link Switching (DLSw) access services, connection services that establish connections between DLSw access nodes, and protocol services that are

capable of at least one of understanding or interpreting Systems Network Architecture (SNA) protocol (col. 2, line 52-col. 6, line 16), said method comprising the steps of: at a source DLSw access node, receiving from a source SNA node a first SNA request message for requesting the establishment of a SNA connection with the target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 4, lines 1-36 and col. 4, line 64-col. 5, line 24) where a packet destined for a node on another network is taken to be a request for establishment of an SNA connection with a target SNA; at said source DLSw access node, locating a target DLSw access node providing access to the target SNA node, sending an undirected query (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36) where this is implicit since it is necessary in order to establish a connection between the source DLSw and the target DLSw; at target DLSw access node providing access to the target SNA node, in response to the undirected query, sending to the source DLSw access node a reply message comprising addressing information of the target DLSw access node providing access to the target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36) where it is implicit that addressing information is contained in a packet since packets are routed according to source and destination addresses; establishing a reserved or non reserved connection within the packet switching network between the source DLSw access node and the target DLSw access node (col. 2, line 52-col. 6, line 16, esp. col. 5, lines 25-48); at the target DLSw access node, sending to the target SNA node a second SNA request message for requesting the establishment of a SNA connection (col. 2, line 52-col. 6, line 16, esp. col. 5, lines 25-48) where, although this is not expressly stated, it is implicit that such a message is necessary in order to inform the target node that a connection is to be formed; and establishing a SNA connection between the source SNA node and the target SNA

node (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 26-36 and col. 5, lines 25-48). Ferguson does not disclose that Data Link Switching (DLSw) nodes locate resources across the packet switching network using a spanning tree, such as by at said source DLSw access node, sending an undirected query over the spanning tree. Mead teaches, as prior art, that different techniques can be used to find a route to a target node including all-route-explorers which broadcast an explorer frame to discover a route to a host node (col. 1, lines 16-36; col. 2, lines 7-19; and col. 2, lines 49-67). Mead also discloses the use of a spanning tree in order to ensure that there is only a single path to a particular node through a network (col. 1, lines 38-53). Haggerty teaches, as prior art, that spanning trees reduce the number of messages transmitted during a broadcast through a network (col. 6, lines 12-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to locate a target DLSw access node providing access to the target SNA node by sending an undirected query over the spanning tree since spanning trees minimize the number of messages transmitted through a network during a broadcast where broadcasting is a well known mechanism used to find a route to a node.

17. Regarding claim 2, referring to claim 1, Ferguson in view of Mead in further view of Haggerty suggests that the step of establishing a SNA connection between the source SNA node and the target SNA node, further comprises the steps of: at the target DLSw access node, receiving from the target SNA node and forwarding to the source DLSw access node a response to the second SNA request message indicating that the SNA connection between the source SNA node and the target SNA node is established (Ferguson: col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36 and Mead: col. 1, line 16-36 and col. 2, line 59-col. 3, line 6); and at the source DLSw access node, receiving from the target DLSw access node the response

to the second SNA request message and sending to the source SNA node a response to the first SNA request message indicating that the SNA connection between the source SNA node and the target SNA node is established (Ferguson: col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36 and Mead: col. 1, line 16-36 and col. 2, line 59-col. 3, line 6).

18. Regarding claim 3, referring to claim 2, Ferguson in view of Mead in further view of Haggerty discloses in the source DLSw access node, storing the addressing information of the target DLSw access node providing access to the target SNA node (Mead: col. 6, lines 37-51).

19. Regarding claim 4, referring to claim 3, Ferguson in view of Mead in further view of Haggerty suggests determining whether the addressing information of the target DLSw access node providing access to the target SNA node has been previously stored (Mead: col. 1, line 65-col. 2, line 7 and col. 6, lines 37-51); retrieving the addressing information of the target DLSw access node providing access to the target SNA node when said addressing information has been previously stored (Mead: col. 1, line 65-col. 2, line 7 and col. 6, lines 37-51); and sending by means of said retrieved addressing information a point to point directed query to the target DLSw access node providing access to the target SNA node (Mead: col. 1, line 65-col. 2, line 7 and col. 6, lines 37-51).

20. Regarding claim 5, referring to claim 4, Ferguson in view of Mead in further view of Haggerty discloses that the addressing information of the target DLSw access node providing access to the target SNA node comprises addressing information of the target DLSw access services within said target DLSw access node (Ferguson: col. 5, lines 36-48 and col. 6, lines 7-16 and Mead: col. 6, lines 37-51).

21. Regarding claim 6, referring to claim 5, Ferguson in view of Mead in further view of Haggerty discloses that the undirected query comprises addressing information, in particular Medium Access Control/Service Access Point (MAC/SAP) address, of the target SNA node (Ferguson: col. 5, lines 36-48 and col. 6, lines 7-16).

22. Regarding claim 9, Ferguson discloses, as prior art, a method for establishing a Systems Network Architecture (SNA) connection between a source SNA node and a target SNA node through a packet switching network using Data Link Switching (DLSw) access services (col. 2, line 52-col. 6, line 16), comprising the steps of: receiving at a source DLSw access node a first SNA request message, the SNA request message requesting an establishment of a SNA connection to a target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 4, lines 1-36 and col. 4, line 64-col. 5, line 24) where a packet destined for a node on another network is taken to be a request for establishment of an SNA connection with a target SNA); sending an undirected query from said source DLSw access node over a spanning tree to locate a target DLSw access node, the target DLSw providing access to the target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36) where this is implicit since it is necessary in order to establish a connection between the source DLSw and the target DLSw; sending to the source DLSw access node a reply message comprising addressing information of the target DLSw access node in response to the undirected query (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36) where it is implicit that addressing information is contained in a packet since packets are routed according to source and destination addresses; establishing a reserved or non-reserved connection within the packet switching network between the source DLSw access node and the target DLSw node (col. 2, line 52-col. 6, line 16, esp. col. 5, lines 25-

48); sending to the target SNA node a second SNA request message that requests the establishment of a SNA connection (col. 2, line 52-col. 6, line 16, esp. col. 5, lines 25-48) where, although this is not expressly stated, it is implicit that such a message is necessary in order to inform the target node that a connection is to be formed; and establishing a SNA connection between the source SNA node and the target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 26-36 and col. 5, lines 25-48). Ferguson does not disclose sending an undirected query is sent over a spanning tree or that addressing information contained in the reply message is stored within a local directory database for future use. Mead teaches, as prior art, that different techniques can be used to find a route to a target node including all-route-explorers which broadcast an explorer frame to discover a route to a host node (col. 1, lines 16-36; col. 2, lines 7-19; and col. 2, lines 49-67). Mead also discloses the use of a spanning tree in order to ensure that there is only a single path to a particular node through a network (col. 1, lines 38-53). Haggerty teaches, as prior art, that spanning trees reduce the number of messages transmitted during a broadcast through a network (col. 6, lines 12-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to locate a target DLSw access node providing access to the target SNA node by sending an undirected query over the spanning tree since spanning trees minimize the number of messages transmitted through a network during a broadcast where broadcasting is a well known mechanism used to find a route to a node. Further, Mead discloses storing addressing information contained in the reply message within a local directory database for future use (col. 1, line 16-36) where it is implicit that this is done in order to minimize the amount of searching that needs to be performed in a network. It would have been obvious to one of ordinary skill in the art at the time of the invention to store addressing information contained

in the reply message within a local directory database for future use in order to minimize the amount of searching that needs to be performed in a network.

23. Regarding claim 10, referring to claim 9, Ferguson in view of Mead in further view of Haggerty suggests that the storing addressing information contained in the reply message comprises removing information in the local database if a negative reply is received. If a negative reply is received, this indicates that the resources are not located at that location, such that any reference in the local database to resources at that location should be removed. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to remove information in the local database if a negative reply is received in order to prevent incorrect information from being stored in the database.

24. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al (USPN 6,571,272) in view of Mead et al (USPN 6,061,728) in further view of Haggerty et al (USPN 6,331,983) as applied to claim 6 above, and further in view of Applicant's admitted prior art.

25. Regarding claim 7, referring to claim 6, Ferguson in view of Mead in further view of Haggerty does not expressly disclose that the packet switching network is a Networking Broadband Services (NBBS) network. Applicant admits that NBBS is a well-known fast packet switching network (page 1, line 21-page 2, line 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to use NBBS since NBBS is a well-known fast packet switching network.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baratz et al (USPN 4,914,571) see col. 2, lines 28-62 which pertains to searching for resources in a computer network. Lebizay et al (USPN 5,602,841) see col. 8, lines 40-62 which pertains to a control point spanning tree. Derby et al (USPN 5,426,637) see Fig. 10 which pertains to the steps taken to set-up a connection between two similar LANs. Shankar et al (USPN 5,909,550) see col. 3, line 46-col. 4, line 43 which details explorer frames in SNA. Periasamy et al (USPN 5,737,526) see col. 1, line 35-col. 3, line 30 which teaches having a hierarchical DLSw network to reduce the amount of explorer traffic.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600